Air Keeper

A Multi-Function, Multi-Mission, Unified Airborne Intelligence and Electronic Attack Solution for Mission Aircraft

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Air Keeper

A Unified, Single Operation Point, Signal Intelligence and EW Solution for Mission Aircraft

- Reduces enemy radar and radio system effectiveness
- Integrates quickly and easily with any existing airborne platform without interfering with other functions
- Targets communications, radar, and other assets
- Tailored to specific customer needs and requirements

Overview

The modern battlefield is characterized by asymmetric warfare and low-intensity confiicts, with fast-moving targets, which are challenging to pinpoint. Conventional intelligence gathering aircraft do not carry soft-kill EW measures and are thus less effective in closing the sensor-to-shooter loop. Providing a force multiplier for mission aircraft, the pioneering, integrative approach to Signal Intelligence (SIGINT) and Electronic Attack (EA) offered by Elbit Systems EW and SIGINT - Elisra assists in quickly and effectively closing the intelligence loop as well as performing EW missions. This approach enables the seamless integration of a wide range of interoperable capabilities of critical importance. The combined capabilities of intelligence gathering and EW soft-kill enable powerful control over the electromagnetic spectrum. These capacities onboard a single platform provide enhanced versatility for a wide range of mission types according to customer needs, combining operational elements – ESM/ELINT, ECM, COMINT, COMJAM and Command and Control (C2) – all operated and managed by a single entity onboard a platform.

This new approach allows any existing cargo, transport, or passenger aircraft to be converted into a strategic and tactical special mission aircraft. These missions can range from intelligence gathering to Electronic Attack – which can also be integrated with existing self-protection solutions onboard the platform. Enabling collection, processing and exploitation and electronic countermeasures, the solution provides decision-makers with a complete, real-time, uninterrupted electronic picture of the arena. Reducing the effectiveness of enemy radar and radio systems, Air Keeper can also target communications, radar and other assets.

The Major Elements

ESM/ELINT
Providing full spectrum 0.5-40 GHz coverage, ESM/ELINT capabilities are integrated into the EW subsystems to automatically detect, measure, identify, monitor and intercept all ground-based, shipborne and airborne radar signals. Elisra's ELINT systems provide uninterrupted platform protection, surveillance, early warning, information gathering and storage, geo-location and data analysis.

ECM
The ECM system simultaneously detects, locates and selectively jams enemy targets – both automatically and manually – delivering the significant operational advantage of pinpoint neutralization of enemy systems while handling multiple threats in parallel. The system brings advanced Electromagnetic Counter Measures (ECM) capabilities to all echelons – strategic, divisional and tactical levels. Combining advanced tactical and strategic capabilities, complete real-time access to the system and full local decision-making and operational autonomy to forces in the field are enabled. The system includes cutting-edge selective jamming capabilities, prevents the jamming of the entire battlefield and secondary disturbances by friendly forces. Withstanding harsh environments, it adapts to all platforms and can be positioned close to frontline forces.

COMINT/DF
An array of Communications, Intelligence and Direction Finding (COMINT/DF) systems – providing advanced demodulation, classification and agile signal detection capabilities – operate over HF-6 GHz frequency bands. They deliver a real-time display of the arena activity, furnishing ultra-fast, accurate DF range measurement in dense environments – and providing a full modular solution for cellular SIGINT and EW. Integration with COMJAM capabilities enables reliable land, sea and air coverage – serving both strategic and tactical objectives.

COMJAM
Combining extremely advanced algorithms and components, the most sophisticated Communications Jamming systems cope with conventional as well as today's most advanced methods, including frequency-hopping. A “look-through” mechanism for reception and activity detection enables precisely-timed selective jamming of targeted signals as well as prioritization of targets. Able to withstand the harshest combat environments, Elisra’s COMJAM systems are adaptable to all platforms – and can escort frontline forces.

Command and Control
The Command, Control, Communication, Computer and Intelligence Systems form the advanced, user-friendly interface that facilitates efficient, accurate and timely operation. Connecting the human factor with the system’s SIGINT and EW elements, the fully integrated system processes and exploits the intelligence gathered by the COMINT/DF and ESM/ELINT stations and manages the missions accordingly.

Self-Protection
The system enables the optional integration with self-protection solutions for airborne platforms, including IR Self-Protection, MWS (Missile Warning System), RWR (Radar Warning Receiver), Jamming System, CMDS (Counter Measures Dispensing System) and Voice and Data Communications.

SATCOM
The system includes a bidirectional satellite data link with a ground satellite station, which enables data transmission, transmission/reception of commands (such as voice) and transmission of information between the aircraft and the ground station. The information, which is presented to the ESM operator, is also transferred to the ground station via the SATCOM system, allowing the display of a real-time identical scenario on the ground.